

Partnering for Innovation

Farmer Impact Survey: NCBA CLUSA







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Executive Summary

This report presents findings from the farmer impact survey that was conducted on the Smallholder Effective Extension Driven Success (SEEDS) project implemented by Feed the Future Partnering for Innovation with NCBA CLUSA, Phoenix Seeds, and Oruwera in Nampula and Zambezia provinces. Under this partnership, NCBA CLUSA, Phoenix Seeds, and Oruwera are improving the seed system in Nampula and Zambezia by establishing an agrodealer network and expanding access to quality inputs (including certified seeds) for 13,000 smallholder farmers in two and a half years.

In general, the purpose of the farmer impact surveys are:

- To provide Partnering for Innovation with data on the use and impact of certified seeds supplied by Phoenix Seeds and Oruwera through the partnership with Partnering for Innovation, including qualitative data on farmers experiences
- To provide critical customer research findings, including customer demographics, product usage feedback, and yields

The objective of the survey is to assess the impact on the farmers that have received services from NCBA CLUSA, Phoenix Seeds, and Oruwera. Through this impact survey, we will address the following questions:

- Are the farmers accessing and purchasing certified seeds produced and distributed by Oruwera and Phoenix Seeds?
- Are the project interventions resulting in increased yields?

In general, the results show that farmers who have purchased seeds from Phoenix or Oruwera are happy with the results in terms of germination and yields. About 11 percent of farmers said they have not experienced the impact of certified seeds due to late planting, supply shortage, and irregular rainfall.

The main challenges reported by farmers concerning access to certified seeds include late supply, long distances to reach seeds stores and fairs sites from their villages (average of 8.5 kilometers), and shortages of certain types and volumes of seeds from agrodealers and Agriculture Development Agents (CBSP's). The farmers interviewed consistently reported that they were unable to access fertilizers and pesticides.

Availability, access, and use of certified seeds is a critical condition for increase of yields and therefore volume of sales and incomes. The impact results from a combination of seed access, use, technology transfer, and access to inputs and outputs market. There is still a great potential to bring about more impact by expanding certified seed marketing and distribution. This could include increasing information dissemination on services offered by agrodealers and community based service providers (CBSPs) and the location of agrodealer shops and seed fairs. Seed fairs have been an effective way of reaching large numbers of farmers. NCBA CLUSA should continue organizing seed fairs, as increasing the number of sites will reduce farmers distance to improved seeds. Mobile communication such as SMS could be used to improve communications between input suppliers, agrodealers, CBSPs, and farmers. Farmers also recommend that the project establish more demonstration plots and visit farmers' fields to ensure they follow the techniques and best practices, particularly for farmers who purchased certified seeds for the first time.

I. Methodology

I.I. Methodology

I.I.I. Sampling

The survey was based on a sample of 150 farmers who were reported as beneficiaries of the SEEDS project in Nampula and Zambezia provinces. Moz Target and Fintrac (which implements Partnering for Innovation) agreed on the sample size of 150 farmers and the interviewees were assigned based on a random systematic sampling from the pool of project beneficiaries. Systematic sampling is a type of probability sampling method in which sample members from a larger population are selected according to a random starting point and a fixed, periodic interval. This interval, called the sampling interval, is calculated by dividing the population size by the desired sample size.

I.I.2. Data Collection and Analysis

The 150 farmers were interviewed from August 5 to 14, 2016. The interviews were based on semistructured questionnaires (Attachment 1) that were developed by Moz Target and Fintrac and were shared with NCBA CLUSA, Phoenix Seeds, and Oruwera prior to the start of the survey. The survey questionnaires were developed in Portuguese and English to allow for discussions with Fintrac and other stakeholders and to be able to interview in Portuguese. Once the final version of the questionnaire was approved, it was then uploaded to i-Form and tested on tablets in Nampula and Zambezia provinces as part of the training.

The data collection team was comprised of nine members, including seven enumerators, and a senior and junior supervisor. When data collection was completed, a database was downloaded from i-Form and was exported to SPSS and Excel for descriptive and frequency analysis. Based on the outputs from SPSS and Excel, findings were provided.



Photo 1 (left): Moz Target team during training sessions in Nampula, August 2016 2 (right): Moz Target enumerators interviewing farmers in Alto Molocue District, province of Zambezia

2. Key Findings

2.1. Customers Demographics

158 farmers were interviewed in Monapo, Malema, and Gurué districts. The sample was allocated to the districts based on percentages of number of customers reported by NCBA CLUSA who purchased certified seeds. A subset of 50 farmers who reported having adopted improved seeds, farming practices, and techniques were then asked questions about yields.

Province	District	Sample	Percent
Nampula	Monapo	28	18
	Malema	41	26
	Gurue	46	29
Zambezia	Alto Molocue	43	27
Total		158	100

Table I. Interviewed customers

2.1.1. Sex and Education of Interviewed Farmers

Of the 158 respondents, 54.4 percent are male and 45.6 percent are female. They are between the ages of 17 and 80 years, with an average of 40 years old. 75.3 percent of respondents are the head of the household and 83.5 percent are responsible for their household farms. Others participate in farming activities as a secondary responsibility.

The majority of the interviewed farmers (77.2 percent) attended primary school, and most of those (49.4 percent) attended only lower primary school (grades 1 to 5) which means they are limited to basic numeracy and literacy. About 12 percent didn't go to school. Only 10.8 percent attended secondary education and therefore are the ones with skills above basic numeracy and literacy.



2.1.2. Size of Farms

Most farmers were interviewed at their homes, and a few were interviewed in the fields where enumerators were able to observe and confirm their land sizes. From the seed supply perspective, the size of farms is important because it demonstrates the potential quantity of seed and other inputs to be used by each farmer. The individual demand estimates can then be multiplied by a total number of farmers to determine the potential demand for certified seeds and other inputs for a specific geographical region. From a production perspective the certified seeds result in increased yield per hectare, and the number of hectares determine the total production increase. Therefore, a combined effect of use of certified seeds and increased area results in a higher increase in total production.

On average, farmers reported having 4.1 hectares of land. The smallest farm size declared was 0.1 hectares and the maximum was 51 hectares. The majority of farmers have between 0.1 and 2 hectares.



2.2. Seed Distribution and Marketing System

2.2.1. Awareness of seed stores and seed distribution agents

The survey results reveal a high level of awareness of certified seeds and the distribution system. 88.6 percent of farmers interviewed reported knowing about the certified seeds manufactured by Phoenix Seeds and Oruwera. This also shows that there is still potential to increase awareness, which could lead to increased purchases of certified seeds and an increased impact on yields and farmers' incomes.

The combination of strategies used for information dissemination has been important and effective. About 60 percent of interviewed farmers said they heard about it certified seeds for the first time in the seed fairs, where they meet with NCBA CLUSA or Phoenix Seeds staff and seed distribution agents; 13 percent heard from fellow farmers; 12 percent from public extension agents; 9 percent from demonstration plots and field days; and 4 percent from the radio.



130 (82.36 percent) of the interviewed farmers have knowledge of the existence of improved seeds, good farming techniques, and demonstration plots and 117 (74 percent) have visited demonstration plots at least once.

Table 2. Knowledge and visit of demonstration plots						
	Frequency	Percent				
Know about existence of demo plots	130	82.3				
Visited demo plots	117	74.1				

Table 2. Knowledge and visit of demonstration plots

All farmers who visited the demonstration plots were asked whether they were consistent in the techniques and practices they learned in order to increase yields and manage soil for increased productivity. The techniques and practices farmers learned through observation at the demonstration plots includes use of improved/certified seeds, planting in lines, spacing between plants, how to apply fertilizers and pesticides, how to apply minimum tillage and mulching techniques, and how to assess when it is the right time to harvest. During training sessions, known as field days, farmers also learned how to estimate seeds, fertilizers, and pesticides for a given land size, soil conservation practices, the importance of crop rotation, intercropping, minimum tillage, and mulching.



2.2.1. Distance to the Seed Stores and Trade Fairs

The average distance from the farmer's residence to the seeds store is 9.1 km. The minimum distance reported was 100 meters and the maximum is about 87 kilometers. The largest number of farmers are within zero to five kilometers to the store.



The average distance to reach the closest seed fair organized by Oruwera or Phoenix is eight kilometers. The minimum distance reported was 100 meters and the maximum was 50 kilometers. The largest number of farmers are within zero to five kilometers from the seed fair sites.



2.2.2. Farming dissemination radio program

Radio is one of the most important resources for farmers to gather information. Twenty-two farmers from Monapo and Malema listened to Namialo radio. Of those, 21 heard about improved farming techniques and practices such as use of certified seeds, plant spacing, conservation farming practices, and crop rotation.

Table 3. Listen to	Namialo	Radio a	and to	farming	program
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	Frequency
Listen Namialo Radio	22
Ever listened to farming dissemination radio program	21
Declaring having learned helpful techniques	21

2.2.3. Access to seed stores and fairs

About 66 percent of interviewees know that certified seed stores exist in their district or village and 78 percent report knowing where seed fairs are organized.



2.2.1. Timing for seed supply

With regards to timing for seed supply, 29 percent of farmers said that seed is always supplied on time, 14 percent said seeds are often supplied on time, 28 percent said they are sometimes supplied on time, 20 percent said rarely on time and 14 percent said seeds were never supplied on time. The villages where farmers reported late supply of seeds included Intocolo and Netiain in Monapo, Muralelo in Malema, Monhia in Alto Molocue, and Mohia in Gurué.



District	Village	Always on time	Often on time	Sometimes on time	Rarely on time	Never on time	Total
	Intoculo	1	0	I	0	3	5
	Mecoma	0	0	0	1	0	1
Моларо	Muelesse	1	0	I	1	0	3
Попаро	Naculue	Ι	0	I	0	Ι	3
	Netia	I	2	5	4	0	12
	Sub Total	4	2	8	6	4	24
	Malema	4	2	3	0	0	9
Malema	Muralelo	5	4	9	7	3	28
	Sub Total	9	6	12	7	3	37
	Alto	1	0	0	0	0	I
A 16 a	Malocue						
Alto	Cavala	I	3	0	I	0	5
riolocue	Mohiua	6	4	9	7	5	31
	Sub Total	8	7	9	8	5	37
	Carico	2	0	0	0	0	2
Curue	Murimo	21	5	10	5	I	42
Gurue	Namarripo	0	I	0	0	0	I
	Sub Total	23	6	10	5	I	45
Alto	Muhiua			2	2	l I	5
Molocue	Sub Total			2	2	I	5

Table 4. Villages reporting late supply of certified seeds

In the cases where farmers said seeds were never supplied on time, this can be attributed to challenges associated with the logistics of seed distribution. Most agrodealers/shop owners are supplied by a truck which travels to various districts, and also supplies the seed at the fairs sites. It might take weeks or a month to reach certain villages.

2.3. Purchase and Use of Certified Seeds

Eighty-four percent of respondents said they know where to purchase certified seeds and the other 16 percent are those who have less access (long distance) to seed fairs, such as in some areas of Monapo. Seventy percent of these farmers purchased the certified seeds. Most farmers access certified seeds manufactured by Phoenix or Oruwera from input trade fairs (53 percent), seed stores (29 percent), and some from distribution agents (12 percent). The others get the seed from other farmers or relatives.

Although distance from farmers' households to seed stores and seed fairs is comparable, more seed purchases happen at seed fairs. Part of the reason for this is that seed fairs are a one stop shop, where farmers gather and meet with suppliers of inputs and other items. Farmers also have the opportunity to sell their commodities and use the money to purchase seeds and other goods that they don't usually have access to, or at least they would hardly find them concentrated in one place. The agrodealers also reported

that they are mainly supplied with input stocks at trade fairs and they sell more of it at the fairs than at the shops/posts.



Among the 158 farmers interviewed, 47 farmers (30 percent) did not purchase certified seeds. The reasons for not purchasing the certified seed included farmers not having enough money to purchase the certified seeds, late supply of seeds, farmers not knowing where to access seeds, and farmers not knowing enough about the benefits of certified seeds to justify the purchase.



Most farmers purchased maize seed, followed by soy beans and cow peas. The table below shows the number of respondents who confirmed they purchased seed last farming season. However, 36 respondents commented that they frequently go to an agrodealer or an agent and are unable to get all of the volume or type of certified seeds that they want to purchase. 19 respondents said they would like to buy fertilizers, but are unable to find it at agrodealer stores, through agents, or at seed fairs.

Seeds Purchased	Frequency	Percent
Maize	93	58.9
Soy Beans	55	34.8
Cow Peas	39	24.7
Common Bean	33	20.9
Pigeon Peas	23	14.6
Sesame	21	13.3
Ground Nut	17	10.8

Among those who purchased certified seeds, 92 percent confirmed that they were instructed by NCBA CLUSA staff or seed distribution agents on how to use the seeds and other inputs they purchased. Seventy-four percent found the advice very helpful, since they were able to see increased yields as explained when they purchased seeds. The next section discusses more on farmer feedback on yield increases as result of access and use of certified seeds combined with adoption of farming techniques and best practices, as a result of the project.



2.4. Impact on yields

2.4.1. Estimates of yields before and after project intervention

As a result of using certified seeds and other inputs combined with good agriculture practices, the farmers interviewed are getting higher germination and yields. Eighty-nine percent of farmers reported experiencing increased yields when using certified seeds.



A total of 21 farmers who reported having used improved varieties were asked about yields before and after. Although the sample is not necessarily statistically representative of all assisted farmers, the results provide useful information on the likely impact of the intervention. Large increases in yields are explained by the fact that the yields that farmers used to get with non-improved varieties were very low compared to the potential of yields with improved ones when combined with changes in farming technique and practices, so basic improvements have a significant impact.

Crops	Number of Farmers Who	Yields (Kg/Ha)			Average
	Were Interviewed and	Before	After		Increase
	Estimated Yields	Intervention	Intervention		(Percentage)
Sesame	2	600	1,000		67
Cowpea	14	650	1,090		68
Pigeon Pea	3	1,000	1,500		50
Soy Bean	10	835.7	1,480		77
Sugar Bean	14	380	660		74
Groundnuts	1	100	400		300
Maize	21	716.7	1,875		162

Table 6	Yields	Before	and After	Project	Intervention
Table 0.	I ICIUS	DCIOIC	and Atter	1 OJCCC	much vention

The survey data are consistent with secondary data reported by PROMER, which collected data from district agriculture departments with regards to increases of yields when smallholder farmers from central and northern Mozambique changed from using non-improved seeds to improved seeds. These are examples of yield data increases:

- Sesame: 660 Kg/Ha to 800Kg;
- Cowpea: 700Kg/Ha to 1000Kg/ha;
- Pigeon pea: 400 to 1200 Kg/ha;
- Soy bean: 852 Kg/Ha to 3,000 Kg/Ha
- Sugar bean: 460 to 1200 Kg/ha;
- Groundnuts: 900 Kg/ha to 2300 Kg/Ha;
- Maize: 1000 Kg/ha to 3,500 Kg/Ha

2.4.2. Satisfaction of farmers with the seeds project

In general, 87 percent of farmers interviewed confirmed that they are happy with the SEEDS project. In instances where farmers were dissatisfied, this could be attributed to challenges in specific areas of Mozambique. Most farmers who were unsatisfied were from Intocolo and Muralelo.



Five percent of interviewed farmers said they were still unsure about the benefits of using certified seed, since they got equal or lower yields. These farmers' comments recognize that they experienced failure mainly due to insufficient rain. Because of climate change, the rains are difficult to predict and farmers are exposed to losses as a result of poor germination or performance. They also mentioned late planting as a result of late supply (20 percent said rarely on time and 9 percent said never on time), as discussed in section 3.2.1.

3. Recommendations to Expand and Improve Seed Distribution Impact

3.1.1. Seed distribution system

Based on the interviews conducted, it is recommended that Phoenix Seeds and Oruwera establish more agrodealers closer to farmers, identify more agrodealers, and train more sales agents. Additionally, the SEEDS project should continue organizing seed fairs and expand outreach to more villages to shorten the distance for farmers to attend. This will have a direct impact on Phoenix Seeds' and Oruwera's sales, as distance is one of the primary determinants in whether a farmer makes a purchase. In addition to distance, the SEEDS project also needs to address availability. Some farmers reported that they that do not get the type or volume of pigeon pea, common bean, maize, sesame, cow pea, soy bean, and cabbage seed that they want to buy. Fertilizers and pesticides are also rarely available from distribution agents and at seed fairs.

The feedback from farmers suggests that partners might be facing some challenges in the logistics involved in the seed distribution due to scattered villages' geographical location;, however, it is important to note that while weather cannot be controlled, the seed supply calendar is a critical factor that could be under project control or influence. NCBA CLUSA and its partners should make efforts to supply seeds at least a few weeks ahead of the possible planting time so farmers have flexibility to plant immediately as it rains.

In terms of information dissemination, the SEEDS project should increase the use of radio and SMS to ensure efficient communication between the various agriculture stakeholders, including farmers, agrodealers, and CBSPSs. An improved communication system could help improve seeds sales by allowing Phoenix and Oruwera to obtain information on demand and adjust their distribution accordingly. The challenge would be the capacity to respond to a large volume of requests. Improved communication coupled with more effective distribution would increase access and availability for many farmers.

The SEEDS project should invest in more seed fairs and seed trucks as a low-cost distribution strategy. These have both proven to be viable alternatives to expanding stores in rural areas. Phoenix Seeds has also begun stocking certified seeds in Export Marketing Company Limited's input shops, thereby increasing smallholder farmer access. The distribution of certified seeds should start ahead of the planting season and take into account changing seasons because of climate change. When coordinating seed distribution, it is important to continue working with representatives of farmers groups, local leaders, agrodealers, CBSPs, and public extension services to assess areas and potential number of customers. This will help to more effectively coordinate supply and demand.

Financing remains an issue for agrodealers and farmers. Agrodealers often limit their stocks of certified seeds, presumably based on their cash flow. Phoenix Seeds and Oruwera should assess the capacity of large agrodealers where credit on consignment could work. At the time of this report, Phoenix Seeds was supplying 23 agrodealers in Nampula and Zambezia with certified seeds on a consignment basis. These larger agrodealers who are receiving seed on a consignment basis could also supply smaller agrodealers located nearby.

3.1.2. Marketing and increase awareness

Technical advice provided to farmers by agrodealers coupled with interactive trainings via demonstration plots are critical to ensuring that farmers maximize their yields by using certified seeds and make repeat purchases. The SEEDS project needs to continue to provide refresher trainings to Phoenix and Oruwera agrodealers and ensure they follow up with their customers. This is especially important for farmers who are purchasing a certain variety of certified seed for the first time.

The project plates are great marketing tools and also clearly identify the agrodealers, CBSPs, and demonstration plots. T-shirts, bags, and tags also contribute to the project's visibility and provides an incentive to agrodealers and CBSPs.

3.1.3. Willingness to purchase certified seeds

Despite challenging economic conditions (devaluation of the metical against the dollar coupled with high inflation), farmer comments indicate that they are willing to pay for certified seeds and other inputs as long as they get them on time. Some farmers stated that they would be more willing to purchase seeds if they could access seeds on a credit basis and then pay back in either cash or commodity after harvest. This model is inherently risky for agrodealers, as many farmers have experienced high levels of default.

One alternative would be to organize farmer groups as input purchasers and as aggregators of commodities. This would allow farmers to receive inputs at a lower cost through economies of scale and receive a higher price for their commodities because of larger volumes being sold. Input companies may be more inclined to lend via this type of model rather than to individual farmers. This model has been successfully used by organizations such as World Vision and Care in Mozambique. Market access opportunities for smallholder farmers are key to convincing farmers to invest in improved inputs such as certified seeds. The hubs being developed by Export Marketing Company Limited is helping to provide the SEEDS farmers with end market opportunities.

4. Attachments

Following are the attachments to this report:

- Attachment I.I. NCBA CLUSA Farmer Impact Survey
- Attachment I.2. Yields Survey Questionnaire
- Attachment 2. NCBA CLUSA Farmer Impact Survey Database Excel
- Attachment 3. NCBA CLUSA Farmer Impact Survey Database SPSS

Attachment I. NCBA CLUSA Farmer Impact Survey

Name of enumerator		
Enumerator's code (initial of first and last names)		

Introduction and Consent Request

My name is....., I work for Moz Target, which was subcontracted by **Fintrac**. I am conducting an impact study on farmers assisted by NCBA CLUSA and theirs partners. The objective of the study is to assess the farmer impact of the NCBA CLUSA implemented SEEDS project. Through this Impact Survey, we will address the following questions:

- Are the farmers having access and purchasing certified seeds, produced and distributed by Oruwera and Phoenix with assistance of the project implemented by CLUSA?
- Are the project interventions resulting in farmers increased yields and incomes?

Your name has been randomly selected and your name won't be disclosed. The result of the survey will inform decision making to improve the assistance to farmers in general. I would like to ask you to allow 30 - 45 min to answer a couple of questions.

Please allow me to write down your answers on the forms.

Introdução e Pedido de consentimento

Meu nome é....., trabalho para **Moz Target**, a qual foi subcontratCBSP pela **FINTRACT**. Estou a realizar um estudo de impacto do projecto implementado pela CLUSA e parceiros. O objectivo do estudo é avaliar o impacto do projecto SEMENTES implementado pelo NCBA CLUSA. O mesmo pretende responder as seguintes questões:

• Será que os agricultores tem acesso e compra de sementes certificCBSPs, produzido e distribuído pela Oruwera e Phoenix com a assistência do projecto implementado pela CLUSA?

• As intervenções do projecto, resultando em agricultores aumentaram a produção e os rendimentos?

O Sr./Sra. foi seleccionado aleatoriamente, o seu nome não será mencionado a ninguém. O resultado geral irá ajudar a melhorar a implementação do projecto de apoio aos produtores em geral. Peço que dispense 30 a 45 minutos para responder a algumas questões.

Permita-me que anote as respostas no papel!

AI	Name (Nome)					
A2	Permanent Residence (Residência)					
A2.1	Province (Provincia)					
A2.2	District (Distrito)					
A.2.3.	Village (Localidade)					
A3	Phone Number (nr. telephone)					
A4	Sex (sexo)					
A5	Age (idade)					
A6	Education Level Attended (Tick applicable one)/Nível de formação frequentado (Assinale opção aplicável)					
1.	() Lower Primary/Escola primaria do 1 grau (1-5)					
2.	() Lower Primary/Escola Primaria 2 grau (6-7)					
3.	() Secondary/Secundario (8-10)					
4.	() 12)/frequentou Ensino Médio (11-12)					
5.	() University /Universidade					
6.	() None/nenhum					
	Are you the head of household? (Tick applicable one)/O Sr/Sra e chefe do agregado familiar?					
A7	1. ()Yes /Sim					
	2. () No/Não					
A8. Wh	io is primarily in charge of managing the farming activity in your household? (Tick applicable one)					
Quem e	e o principal responsavel pelas actividades agrícolas? (Assinale opção aplicável)					
	$I_{\rm c}$ () (My solf) The respondent/ (Eu) O entrovistade					
	2 () other/Outro					
A9. Wh	at is the size of your/s farm/s? Qual é o tamanho total da/s sua/s machamba/s (Ha)					

B. Awareness of seed stores and seed distribution agents/ Conhecimento sobre as lojas de sementes e agentes de distribuicao?

B1. Do you know about the certified seeds manufactured by Oruwera or Phoenix? (yes/no) Tens conhecimento acerca de sementes certificCBSPs produzidas pela Oruwera or Phoenix? (Sim ou Não)

B.2. (If C.3.1.1 is yes) How did you hear for the first time about the certified seeds manufactured by Oruwera or Phoenix? (Tick applicable ones) / se sim como teve conhecimento pela primeira vez? 1. () Through public extensionists/ Através dos extensionistas/técnicos da agricultura 2. () Seed fairs/feiras de sementes) SEEDS input shop/ loja de sementes 3. (4. () Radio broadcast,/ Programa de radio) CLUSA or Phoenix staff/ pessoal da CLUSA or Phoenix 5. () CLUSA Promac project, demonstration plots and field days/ campos de demostração e dias de campo 6. (organizados pelo projecto CLUSA e PROMAC) Neighbor or other farmers/ Vizinho ou outro produtor 7. (8. () Other/outro (specify.....) B.3. Do you know where to buy certified seeds in your district or village? (Yes / No) Tem conhecimento de onde comprar sementes certificCBSPs no seu distrito ou localidade? (sim/não) B.4. (If yes...) Where? Se sim, aonde?) Seed fairs/feira de sementes I. (2. () Seed stores/loja de sementes 3. () Seed distribution agents/provedores de serviço na comunidade/revendedores de sementes? 3. () Other/outros(Specify.....) B.5. (If C.3.1.1 is yes) How did you hear for the first time about the seed stores selling certified seeds? (yes/no) / se sim, como teve conhecimento pela primeira vez sobre revendedores/as lojas de sementes certificCBSPs? 1. () Through extension training/ Através dos extencionistas) Inputs distribution agentes or shops/Revendedores/promotores da agentes ou lojas de sementes 2. () Input trade fairs/feiras agrícolas 3. (4. () Radio broadcast,/ Programa de radio 5. () SEEDS input shop,/ loja ou cantinas 6. () Neighbor or other farmers/ Vizinho ou outro produtor) CLUSA Promac project, demonstration plots and field days/ campos de demostração e dias de campo 7. (organizados pelo projecto CLUSA e PROMAC) Other/outro (specify.....) 8. (

C. Demonstration Plots and Advices to Farmers / Campos de demonstracao e aconselhamento

C.I.	(Only Zambezia/Phoenix) Is there any demonstration plot demonstrating the benefits of certified seeds (established by PROMAC or CLUSA SEEDS-Phoenix) in your district or village? (Circle the answer) /Existe algum campo de demonstração a mostrar os benefícios de sementes certificCBSPs (estabelecidas por Promac ou CLUSA SEEDS- Phoenix) no seu distrito ou localidade?	Yes / No)		
C.2.	(Only Zambezia/Phoenix) (If yes) Did you ever visit yourself/in group or attend any field days at the demonstration plot? Yes/No (Se sim) Terá alguma vez visitado sozinho/em grupo o campo de demonstração ou participou num dia de campo?	Yes / No)		
sozinho/em grupo o campo de demonstração ou participou num dia de campo? If yes, continue on C3, if no go to C4/SE sim continue no C3, se nao passé para C4					
C.3. (Only Zambezia/Phoenix) Have the visit or field days at the demonstration helped your lea					
the advantage of and how to use certified seeds? (Tick applicable one) Será que as visitas e dias de campo de demonstração ajudaram a perceber a vantagem do uso das sementes certificCBSPs?					

1. () Yes, it helped very much/sim ajudaram muito						
2. () Yes, it fairly helped/sim ajudaram um pouco						
3. () Neutral or not sure/ Não sei						
4. () It didn't help at all/ Nao ajudou						
C 4	(Only for the range of Namialo Radio station) Do you listen to Namialo Radio Yes / No						
С.т	Station? (Circle the answer) Tem escutado a Radio Namialo?						
lf yes, co	If yes, continue C.5; If no, go to D/Sem sim continua C.5. e se não passa para D.						
	(If yes) Have you ever listen to any Namiela radio program that dessiminate Yes / No						
C 5	information about farming, and certified seeds? Yes/No (Circle the answer) (Se sim,						
0.5	alguma vez escutou um programa da Radio Namialo que fala de agricultura e						
	sementes certificCBSPs? Sim/Não						
lf yes, co	ntinue on C.6; If no, go to D/Sem sim continua C.6. e se nao passa para D						
	(Only Nampula/Oruwera) Did you learn anything about seeds and farming from the radio						
	program?(Tick applicable one)/ Aprendeste algo sobre sementes e praticas agrícolas através do						
	programa da radio?						
C.6	1. () Yes, I learnt so much/sim aprendi muito						
	2. () Yes, i learnt samething/sim aprendi algo						
	3. () Neutral or not sure/ Não sei						
	4 () It didn't learn at all/ Nao aprendi nCBSP						

D. Access to seed stores and fairs/ Acesso a loja de sementes e feiras

D.I. Is there any seed store in your district or locality? (yes/no)/Existe uma loja de sementes ou se					
realizam feiras de sementes no seu distrito ou localidade? (Sim/Não)					
If yes, continue D.2; If no, go to D.3/Sem sim continua D.2. e se não passa para D.3.					
D.2. How far is the seed store from your residence? Qual e a distância entre a loja de sementes e a	sua casa?				
Kmor Hours walking/Horas a peor Hours driving/Horas de carro					
D.3. Do you know where seed fairs are organized?(yes/no) Sabes onde as feiras são realizCBSPs?					
(sim/Não)					
If yes, continue D.4; If no, go to E/Sem sim continua D.4. e se não passa para E.					
D.4. How far is the seed fair from your rersidence? Qual e a distância entre a feira e a sua residência?					
Kmor Hours walking/Horas a peor Hours driving/Horas de carro					

E. Purchase of certified seeds?/ Compras de sementes certificCBSPs

E.I. Have you purchased certified seeds (in seeds stores/fairs/agents)? (yes/no) / Já comprou					
sementes (nos revendedores/feiras/lojas de sementes)? (sim/Não)					
If no, continue on E.2, if yes go to E.3/Se nao continua E.2. e se Sim passa para E.3.					
E.2 (If not) Why not? Se não comprou porque não?					

E.3. Do you know any other farmer from your village who purchased certified seeds? (Yes /No)/ Conhece algum produtor que já comprou sementes certificCBSPs?(Sim/Não)

E.4. If yes, which of the following certified seeds did you purchased last season? /Se sim, quais destas sementes								
certificCBSPs adquiriu na última campanha?								
Crops/culturas	Seed store/loja de sementes (assinale x)	Seed fair/feira de sementes (assinale x)	Agent/agente (assinale x)	Other/outro (especifique)	Amoun t (Kg)			
a. Sesame /gergelim								
b. Cow Peas/ Feijao boer								
c. Pigeon peas /Feijao nhemba								
d. Soy beans/soja								
e. Sugar bean/ feijão manteiga ou feijão vulgar								
f. Ground nut/ Amendoim								
g. Maize Milho								

E.5. ls	E.5. Is the seed made available in seed stores and seed fairs at the right time? (Tick applicable ones)/ Será que a					
semer	semente tem chegado em tempo certo nas lojas de sementes e feiras?					
I. () Always on time /sempre a tempo	4. () Rarely on time/Raramente a tempo			
2. () Often on time/ muitas vezes a tempo	5. () Never on time/ Nunca a tempo			
3. () sometimes on time/ por vezes a tempo					

E.6.	(Both Zambezia/Phoenix and Nampula/Oruwera) Do the seed distribution agents or seed stores advice you or explain you how to use the certified seeds? (Yes/No)/Será que as lojas de sementes, os provedores de serviço na comunidade ou revendedores de sementes aconselham sobre como usar a semente? (Sim/Não)							
If yes, co	If yes, continue E.7; If no, go to F/Se sim continua D.7. e se não passa para F.							
	(Both Zambezia/Phoenix and Nampula/Oruwera) Have these advices been helpful? (Tick applicable							
F 7	1 () Yes, it helped very much/sim aiudaram muito							
L./.	2. () Yes, it fairly helped/sim ajudaram um pouco							
	3. () Neutral or not sure/ Não sei							

4. () It didn't help at all/ Não ajudou

F. Satisfaction and Recommendations/ Satisfação e Recomendações

F.I. Have you noticed any difference of germination and yields between certified and non-certified seeds? (Tick applicable ones)/ Notaste alguma diferença na germinação e rendimentos usando sementes certificCBSPs e não certificCBSPs?

- I. () certified seeds are much better/ sementes certificCBSPs são muito melhores
- 2. () certified seeds are fairly better/ sementes certificCBSPs são relativamente melhores
- 3. () Equals/iguais
- 4. () certified seeds are worse/ sementes certificCBSPs são piores
- 5. () Not sure/ Não tenho certeza

F2. Are you overall satisfied with the supply and quality of certified seeds ? (Tick applicable one)/ No geral esta satisfeito com a rede de promoção/venda e qualidade da semente certificCBSP da semente da Phoenix e/ou Oruwera?

- I. () Very satisfied/Muito satisfeito
- 2. () Somewhat satisfied/um pouco satisfeito
- 3. () Neutral /neutro
- 4. () Somewhat dissatisfied/ um pouco insatisfeito
- 5. () Very dissatisfied/ muito insatisfeito
- F.3. If 4 or 5 why?/Se 4 ou 5 Porque?

F.4. Is there anything that could be improved on: seeds availability, quality, cost, timing of seeds supply, advise, or seeds fairs? /Haverá algo por melhorar em relação: disponibilidade, qualidade, tempo de venda da semente, custos, realização de feiras de sementes ou no aconselhamento ou campos de demonstração?

Thank you! The information you provided will not be disclosed, and will be useful for the improvement of the project support to farmers.

Obrigado! A informação prestCBSP será tratCBSP com confidencialidade e será muito útil para melhorar a assistência aos produtores em geral!

Attachment 2 . Yields Survey Questionnaire

A-A5: D	A-A5: Demographic information/Informação Demográfica					
A01	Name of farmer/nome do agricultor					
A02	Permanent Residence/residência permanente					
A02.1	Province/provincia					
A02.2	District/distrito					
A02.2	Village/ Localidade					
A03	Area/Bairro					
A04	Phone Number/Numero de Telefone					
A05	Sex/Sexo					

BI-B4: Crops produced and intercrop practice/ Culturas Produzidas e Practica de Consociação ou Policultura							
B01What crops did you plant last season (2015-2016)? (Tick all applicable)							
Que culturas plantou na epoca passCBSP 2015-2016?							
	I. Sesame/ <mark>gergelim</mark> 2. Cow Peas/feijão boer 3. Pigeon peas/feijão nhemba 4. Soy beans/soja 5. Sugar bean/feijão manteiga ou vulgar	 [] 6. Ground nut/amendoim [] 7. Maize/milho [] 8. other [] 9. other [] 10. other 					
B02	Did you intercrop/mix plants in same field? (Yes/No) Terá feito consociação/mais que I cultura no mesmo campo?						
B03	B03 Which ones did you intercrop? (Names grouped as per combinations) Quais culturas cultivou em onsociação/mais qu euma cultura no mesmo campo?						

B04	Which ones you planted just one crop per plot? (Names)
DUT	Quais culturas plantou em monocultura?

B05-12: Area plante	ed, inputs and s	ervices used a	nd costs/ <mark>area p</mark>	lantCBSP, insu	mos e serviços e o	custos		
Name of crops Nomes das culturas	B05 What is The Total Area Planted for each crop? Qual foi a área total cultivCBSP? (Ha)	B06 Did you use certified seeds for each of these crops? (Yes/No)? Usou sementes certificCBSPs? (Sim/Não)	B07 What quantity of seed did you plant for each crop? (kg) Qual foi a quantidade de sementes usCBSP? (Kg)	B08 How much did you spend to buy certified seeds for each crop? (MZN)? Quanto gastou pela compra de sementes? (Kg)	B09 Did you rent tractor or other equipment for land preparations or other farming activities? (Yes/No)? Alugou tractor ou outro equipamento para serviços da machamba?	BIO (if yes) How much did you spend to rent tractor and other equipment for land preparations on the planted area? (MZN)? Quanto gastou em aluguer de equipamentos? (MZN)	B11 Did you apply fertilizers and pesticides? (Yes/No) Aplicou fertilizantes e pesticidas? (Sim/Não)	B12 How much did you spend to buy fertilizers for each crop in the planted area (MZN)? Quanto gasto pela compra do quimicos (fertilizantes pesticidas) (MZN)
1. Sesame /gergelim								
boer								
3. Pigeon peas /Feijao nhemba								
4. Soy beans/soja								
5. Sugar bean/ feijão manteiga ou feijão vulgar								

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6. Ground nut/ Amendoim				
7. Maize/Milho				

BI3 –BI9 Total production, consumption, volumes sold, prices/Produção total, consume, vendas e preços							
Names of crops Nomes das culturas	B13 What was the total production/yield? (kg) Qual foi a quantidad total (de toda/s machamba) colhida de cCBSP cultura? (Kg)	B14 How much of your total production did you use for household consumption? (kg) Qual a quantidade usCBSP para o consume? (Kg)	B15 How much of your total production did you sell? (kg) Qual é a quantidade da sua produção que vendeu? (Kg)	BI6 For crops sold, what was the price per kg that you sold your products? (MZN) Para culturas vendidas qual foi o preço (MZN)	 BI7 Where did you sell most of your product? Onde/para quem vendeu a maior parte do produto? [] A - Local market, [] B - Intermediary, [] C - Individual buyer? 	B18 Did you store some seed for the season that is starting now (2016- 2017)? (Yes/Now) Guardou alguma parte para semente para epoca 2016- 2017? (Sim/Não)	B19 (if yes) How much seed (Kg)? Qual a quantidade guardCBSP para semente? (Kg)
I. Sesame /gergelim							
2. Cow Peas/Feijao boer							
3. Pigeon peas /Feijao nhemba							
4. Soy beans/soja							
5. Sugar bean/ feijão manteiga ou feijão vulgar							

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6.	Ground nut/				
Ame	endoim				
7.	Maize/Milho				
-			1		
8.	Other/outra				
0	Otherlautra				
7.	Other/outra				
10.	Other/outra				

CI-C2: Productivity Increase and contributing factors/Aumento da productividade e factores determinantes

C01 By how much did yields increase per crop, comparing before and after applying new techniques transferred by the project? (the enumerator must ask farmers to use as basis the same land size to compare yields, and may use any units consistently for before and after assistance. Then perce of increase will be calculated during analysis)

Qual foi o grau de aumento do rendimento, comparando antes e após a aplicação das novas técnicas transferidas pelo projecto? (o inquiridor deve pedir ao produt pensar numa machamba real e comparar a quantidade total colhida nessa machamba, antes e depois, para depois clcularmos a percent)

Names of crops		C3.Yields before	C.4.Yields After Project Assistance	
Nomes de culturas		Antes da Assistecia - Rendimento total por cultura para area de referencia? (Kg)	Após a Assistecia - Rendimento total cultura para area de referencia? (Kg)	
Sesame /g	ergelim			
Cow Peas	/Feijao boer			
Pigeon pea	as /Feijao nhemba			
Soy beans	/soja			
Sugar bear	n/ feijão manteiga ou feijão vulgar			
Ground n	ut/ Amendoim			
Maize/Mill	0			
C05	What are the new farming techniques/practices ha Quais são as practicas e técnicas ensinCBSPs pelo proje	ave you adopted as result of the project? ecto (CLUSA/iDE/BOM/ETG)	I	

	Do you have any comments on the assistance received and about access to seeds, services, market?
D01	Tem algum comentário em relação a assitencia de (CLUSA/iDE/BOM/ETG) ou sobre acesso a sementes, serviços e mercado?